FIRE DEPARTMENT PHYSICAL FITNESS: A BULLHEAD CITY APPROACH

EXECUTIVE LEADERSHIP

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An applied research project submitted to the National Fire Academy as part of the Executive Fire Officer Program

February, 1998

ABSTRACT

Each year, death and injury surveys demonstrate that fire fighting remains one of the most dangerous occupations in the United States. The unique environment and high demands of fire fighting require above average levels of physical fitness. Research has repeatedly shown the need for high levels of fitness to perform safely in the fire service.

The fire service's greatest asset is not equipment, apparatus or stations, but rather its personnel. The purpose of this research is to identify current deficiencies in the fitness levels of Bullhead City Fire Department personnel, educate personnel in areas of physical fitness, and to establish a comprehensive physical fitness program.

Using historical, evaluative, and action research methodology, the following research questions to be answered are:

1. What is the injury history of Bullhead City Fire Department personnel and would a fitness program decrease the potential for injury?
2. Should the Bullhead City Fire Department establish a formal physical fitness program and if so, should that program be mandatory or voluntary?
3. What components should be included in a physical fitness program if implemented?
4. How should a physical fitness program be implemented and sustained?

A literary review was performed to examine existing documentation relative to physical fitness in the fire service. In addition, historical research was performed concerning injury rates

for Bullhead City Fire Department members. A committee was formed to develop a questionnaire on physical fitness and answer other questions relative to a fitness program.

As a result, the Bullhead City Fire Department has developed a fitness document that is considered to be the beginning of a comprehensive wellness manual that is specific to Bullhead City. This document is dynamic in that it is readily expanded. Currently, the components included are a statement of purpose, a policy statement, medical evaluation, aerobic endurance, flexibility, muscular strength, body composition, and a job-related physical agility component.

Unfit fire fighters are less able to fulfill their commitment to their communities if they are unable to perform essential functions of the job. It is recommended that each fire fighter take a serious step at improving their physical fitness. It is much easier to remain in shape than to try to get back in shape. It is further recommended that administration take a back seat and facilitate rather than force a particular fitness program on the membership. Members that can take pride in ownership are more likely to encourage success of the program than having one that was forced on them.

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INTRODUCTION

Each year, death and injury surveys demonstrate that fire fighting remains one of the most dangerous occupations in the United States. The National Fire Protection Association analysis of U.S. fire fighter fatalities in 1996 indicate that although line of duty deaths fell 3.2%, heart attack still account for approximately half of the deaths. Medical documentation indicates that most victims had prior heart or circulatory problems. (National Fire Protection Association [NFPA], 1997) The unique environment and high demands of fire fighting require above average levels of physical fitness. Research has repeatedly shown the need for high levels of fitness to perform safely in the fire service.

The fire service's greatest asset is not equipment, apparatus or stations, but rather its personnel. It is through personnel that the fire department is able to serve the public and accomplish its mission of fire suppression, EMS activities, rescue, hazardous materials response, and fire investigations in addition to any other task that may be required.

The purpose of this research is to identify current deficiencies in the fitness levels of Bullhead City Fire Department personnel, educate personnel in areas of physical fitness, and to establish a comprehensive physical fitness program.

Using historical, evaluative and action research methodology, the following research questions to be answered are:

1. What is the injury history of Bullhead City Fire Department personnel and would a fitness program decrease the potential for injury?

2. Should the Bullhead City Fire Department establish a formal physical fitness program and if so, should that program be mandatory or voluntary?
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4. How should a physical fitness program be implemented and sustained?

BACKGROUND AND SIGNIFICANCE

Bullhead City is a medium size, desert community of 27,000 full time residents. The city is situated along the Colorado River approximately 10 miles north of the junction between the states of Arizona, Nevada, and California. The town was originally formed as a base camp to ferry mining supplies across the river in the mid-1800's. Then, during the late 1930's and early 1940's the town served as a construction camp for the building of Davis Dam. In 1947 the permanent population of the community decided to form a volunteer fire department and, with of vote of 17 to 0, the Bullhead City Fire District was created serving an area of 1 square mile.

Due to the warm weather and recreation that was available along the river, the town became a Mecca for retirees. Several subdivisions, scattered throughout the area consisting of mainly mobile homes, sprang up in the late 1960's and 1970's. By 1971, the Bullhead City Fire District had grown to 33 square miles and served a population of over 5,000. In addition, the gaming community of Laughlin, Nevada was beginning to form on the opposite bank of the Colorado River. Since there was very little land available for development on the Nevada side of the river, Bullhead City became the bedroom community for this gambling area.

In 1973, the volunteer fire chief decided it was time to hire the first full time fire fighters. The crew consisted of 1 person to remain in the station to assume the duties of dispatcher and 1 person to drive the fire truck to the scene where he would be met by the volunteer fire fighters. At this time, there were no physical requirements to be a fire fighter. Membership was granted by an affirmative vote of the existing volunteers.

By 1979, in order to be eligible for full time status, an applicant would have to run one mile in under eight minutes and be able to perform a series of tasks that were somewhat related to the duties of fire fighting. There were no continuing physical fitness requirements imposed once a member gained full time status. A volunteer fire fighter still only needed to be voted in by a majority of the membership; no physical requirements were imposed.

In 1986, the requirements to be considered for full time status were changed to include completion of a one and a half mile run in under 13 minutes and several consecutive tasks that were commensurate with the duties of a fire fighter. Continuing fitness activities were encouraged during off duty hours and were strongly suggested if the chief felt as though a fire fighter was "packing on a few too many pounds". Volunteers were no longer utilized, but were instead replaced with by reserve fire fighters. This new breed of "reserve" fire fighter had to pass the same physical entrance test as any other full time fire fighter, but once accepted, did not have continuing fitness requirements.

By 1992, fire fighter fitness had received much publicity and was gaining increasing acceptance in the Bullhead City Fire Department. Annual physical agility testing was required of all employees, some fire fighters were given medical physical examinations, each station

received an AirDyne stationary bicycle and a stair step machine, and duty time was allowed for physical training. Weight training was allowed, but the equipment must have been purchased with other than tax generated revenue.

As the Bullhead City Fire Department grew; currently there are 4 stations and 60 suppression applicable employees, so did the need for a comprehensive physical fitness program. Current administration, as compared to past, is more willing to support activities to further the wellness of employees if the gains can be shown to be measurable and beneficial. The purpose of this research is to explore that need, develop a program or programs that will be acceptable to all concerned, and determine an implementation schedule that is realistic and achievable by all members of the department.

This research project relates to Executive Leadership course in that it attempts to determine that a physical fitness program is vital to the continued well being of the organization. Further, this process should encourage individuals within the work unit, now and in future endeavors, to become more involved in the development of programs within the organization by providing them the opportunity to develop, implement, and evaluate all phases of a program that directly impacts them. This participative management style is one of the first attempts within the Bullhead City Fire Department to allow "labor", in cooperation with "management" to shape the future of the department.

LITERATURE REVIEW

FITNESS FOR FIRE FIGHTERS.....WHY?

"The fire service's greatest asset is not equipment, apparatus or stations, but rather its personnel. It is through personnel that the fire departments serve the public, accomplish their missions, and are able to make a difference in their communities" (International Association of Fire Fighters, [IAFF], 1997, p. 6).

> There are two classes of men and women in our cities who, more than almost any others, need daily and systematic bodily exercise in order to make them efficient for their duties. They do on the home front what the army does for the whole country in war time - they protect life and property. These are the police and fire fighters (Baeta, 1993, p. 1).

"Each year in recent history, over 100 line of duty deaths have been recorded among career and volunteer fire fighters in the United States alone." In addition, "there is growing concern with the number fire fighters who suffer disabling injuries and conditions that often have debilitating or fatal consequences and force them to discontinue their fire service activities" (NFPA, 1992, pp. 1). The United States Fire Administration maintains statistics on fire fighter injuries over the past several years. "The leading number of fire fighter injuries (39.7%, as shown in Appendix A) are due to strains, sprains, and muscular pain from overexertion or falls" (United States Fire Administration [USFA], 1996, Chapter 1, p. 1). Almost 50% of all fire fighter deaths are caused by heart attack. "Good health and physical fitness will never eradicate

all deaths and injuries but many problems, especially heart attacks, can be reduced by good health and fitness" (National Fire Academy [NFA], 1988, Chapter 2, p. 2).

According to D. T. Jacobs, *Physical Fitness and Public Safety*, the needs of a fire fighter are similar to that of a professional athlete. However, athletes have the advantage of being able to train for a particular sport and season, whereas the firefighter must be in good enough physical condition to be ready for any challenge (1980). Firefighting is different from other physically demanding jobs in that industries have the ability to design jobs to an individual but firefighters must be able to meet the demands imposed by various emergency conditions at any given moment.

"The job of fire fighter is universally recognized as being one that requires an above-average level of strength and fitness. Yet, today the typical fire fighter is generally in no better physical condition than his civilian counterpart" (Peterson, 1990, p. 77). "The unique environment and high demands of firefighting require above-average levels of physical fitness" (USFA, 1990, Chapter 1, p. 1). And, the National Fire Academy course guide for *Fire Fighter Safety and Survival* states that, "Fire fighting is one of the most physically demanding and dangerous of all professions. It requires above average strength to rescue victims, place ladders, handle hoselines, and force entry with heavy tools" (1988, Chapter 2, p. 1). This same publication also points out that high levels of aerobic fitness are essential to conduct other such fire ground activities as rapidly moving down hallways, climbing ladders, or fighting fires on steep hillsides. "Research has repeatedly shown the need for high levels of fitness to perform safely in the fire service" (IAFF, 1997, p. 3). Because of the long hours associated with fire

fighting, the shift type of schedule, the sporadic and unpredictable high intensity workload, strong emotional involvement, and excessive exposure to human suffering, fire fighting is among one of the most stressful occupations in the world.

The impact of physical fitness on the health and safety of fire fighters is such that the topic is addressed in several National Fire Protection Association standards as well as other fire suppression related publications. NFPA 1582 lists the fitness requirements for fire fighters while NFPA 1500 states that all fire departments must have a physical fitness program.

BENEFITS.....ARE THERE ANY?

According to Jacobs, "the benefits of physical conditioning as they relate to physical Functional capacity are self-evident. If the functional capacity of a fire fighter can be increased with physical training, the value of such a program should also be obvious". Jacobs further states that, "Simply put: fit people function better. Fit fire fighters perform better, and more safely" (1980, p. 9). In a *Fire Command* magazine article ten years later, researchers were still saying, "a fit fire fighter can accomplish more work at a lower heart rate, requiring less air in the process. Simply put, a conditioned fire fighter produces more work with much less effort and less risk to the heart and blood vessels" (Berk and Crumrine, 1990, p. 21).

"Physical fitness relates to a longer, healthier life without avoidable chronic disease. On a daily basis, a physically fit body can defend one against on-the-job illness and injury" (USFA, 1994, p. 146). According to *Fire Fighter Safety and Survival*, "body strength and flexibility can reduce falls and sprains, preventing damage to bone and tissue. Good lung capacity can

reduce relative carbon dioxide levels and sustain the oxygen input into the blood stream" (1988, Chapter 2, p. 2). Also, "many fire fighters have survived severe physical trauma simply due to the fact they were in top physical shape".

"A physically fit employee stays on the job longer, thinks more clearly, operates more safely, gets along better with co-workers, and generally gets more personal satisfaction out of the job" (Jacobs, 1980, p. 15). Further, there is verifiable evidence that participating in an employee fitness program will stimulate and enhance productivity.

And finally, physical fitness is cost efficient. "Injury rates and sick leave usage can be reduced, thereby controlling overtime costs associated with filling vacant positions or utilizing other agencies for response" (IAFF, 1997, p. 5). Also, "Fire departments with members who are medically, physically, and mentally fit will provide better service to their communities year after year while realizing reductions in disability retirements by their uniformed personnel". Put rather simply and clearly, Jacobs points out that people who exercise are less likely to be overfat. People who are not overfat have fewer back injuries. People who have fewer back injuries are less likely to be disabled. People who are less likely to be disabled are less likely to incur compensation costs to an employer. Therefore, "it could be concluded that a fitness program which encourages people to exercise properly is a sound economic investment for any city or town" (1980, p. 14).

SUPPORT.....IS THERE ANY?

"To be successful, the physical training must involve and obtain the support of all parties involved - the municipal or regional government, the department administration, labor, and all personnel " (USFA, 1996, Chapter 7, pp. 6-7).

The president of the International Association of Fire Chiefs [IAFC] in a 1997 *On Scene* article stated, "We spend a significant amount of money monitoring our equipment and apparatus. It just makes sense to use our money to help maintain our most important resource: our employees (Paulison, 1997). An excerpt from the position paper of the IAFC Board of Directors in December of 1996 explains that, " a program of physical fitness, health and wellness should be an objective at every fire department as a means for potentially reducing fire fighter injuries" (IAFC, 1997).

In 1997, the International Association of Fire Fighters and the International Association of Fire Chiefs, introduced a cooperative document entitled, *Fire Service Joint Labor Management Wellness-Fitness Initiative.* In this document, Alfred K. Whitehead, General President of the IAFF states:

> The International Association of Fire Fighters and the International Association of Fire Chiefs have joined together in an unprecedented endeavor. We have gathered together some of North America's finest fire departments to build a stronger fire service by strengthening our foundation--the fire fighter and EMS responder. Meeting the challenges of tomorrow's fire service requires that we keep our uniformed personnel fit today (IAFF, 1997, p. iii).

This document outlines a comprehensive wellness program, that includes fitness among other components, that has been endorsed by both agencies.

THE FITNESS PROGRAM.....WHAT SHOULD BE INCLUDED?

In recent years, much has been said on the importance of obtaining a complete physical exam and a medical release from a physician before engaging in a physical fitness program. However, there was an interesting opinion by to Jacobs in 1980:

> Graded exercise EKG's are often recommended as a prerequisite for participation in a fitness program or for fitness assessments in the field. It is the author's opinion, however, that such a recommendation cannot be sufficiently substantiated. In a group of people with normal coronary arteries, a significant percentage may be diagnosed as abnormal by this test. Moreover, the test may fail to diagnose up to 60% of those with proven coronary artery disease. The unreliability of the test, its tendency to often discourage people from initiating an exercise program, and its expense to administer are the basis for NOT recommending the test as a mandatory prerequisite.
>
> It is absurd to suggest that an individual can perform the duties of a fire fighter but cannot engage in a properly designed exercise program. When the fitness program follows guidelines emphasizing gradual intensities, noncompetitive activities, and training heart rate theory, exercise is appropriate for most individuals, whether or not they have heart disease (1980, pp. 50-51).

When discussing physical fitness in the fire service, most recent recommendations take a far more conservative approach. "Each fire fighter should undergo a complete physical exam before starting a physical fitness program" (NFA, 1988, Chapter 2, p. 3). " A full medical exam is advisable for anyone preparing to start a fitness program" (USFA, 1994, p. 147.) "An annual medical evaluation, using a standard such as *NFPA 1582, Medical Requirements for Fire Fighters* (Appendix A), promotes a pro-active posture in identifying and treating potential medical problems" (IAFC, 1997). "All personnel should have an initial health status interview and physical examination to provide a basis for comparison, if symptoms emerge later" (USFA, 1996, Chapter 7, p. 3).

And finally, specifics for medical requirements are established in Chapter 8 of *NFPA 1500, Fire Department Occupational Safety and Health Programs* (Appendix B). Some of the requirements are 1) prior to becoming members, candidate fire fighters are to be medically evaluated and certified by the fire department physician; 2) candidates and members who engage in fire suppression must meet the medical requirements in NFPA 1582 prior to being certified for duty; and 3) members who engage in fire suppression shall have at least an annual medical evaluation and shall meet the requirements as specified in NFPA 1582.

"Physical fitness has a number of sub-components, but they may be divided into three general areas: aerobic, or cardio-vascular fitness; muscular fitness; and body composition" (USFA, 1990, Chapter 1, p. 8). In EMS Safety, the same components are listed with muscular fitness being broken down into the four components of muscular strength, power, endurance, and flexibility (1994).

At the Phoenix Fire Department's 6th Annual Health, Fitness, and Safety Training Seminar, Al Baeta described an expanded definition of physical fitness to include the components of endurance, muscle strength, flexibility, sound nutritional practices, body composition, and an awareness of rest and relaxation (1993).

PROCEDURE

A literary review was conducted utilizing the National Fire Academy's learning resource center while attending the Executive Leadership course during the summer of 1997. Dozens of previous research papers had been completed on the topic of physical fitness and a wealth of material was available. Other sources of information included the most recent editions of fire based management books, periodicals, and a recent publication entitled, *Fire Service Joint Labor Management Wellness-Fitness Initiative.* As this department is a fairly new subscriber to the ICHIEFS Network, a search was completed vial the Internet under the topic of "physical fitness". There were several "hits" and some of these papers were utilized.

GETTING STARTED.....

It was decided that a small committee would form to determine the course of action that the Bullhead City Fire Department would pursue in determining whether or not it should establish formalized physical fitness requirements and/or standards. The committee consisted of at least one appointed representative of each shift and anyone else who had an interest in physical fitness. This author chaired the committee as the Assistant Chief of the department.

At the initial meeting, the nature of the problem was discussed including the lack of medical standards, lack of an organized physical fitness program, and the lack of a periodic testing mechanism.

Also during this first meeting, it was decided that in order to determine the inefficiency of the current non-existent system, a historical review and department related research would need to take place. Before a follow up meeting could take place, committee members were assigned several questions that would need to be answered:

1. First and foremost, is a majority of department members in favor of establishing a mandatory physical fitness program? As a young and growing department, it was hypothesized that there would be very little opposition to a program. However, the committee thought it would be a good idea to ask for input and support in order to minimize the perception that a program would be "forced" on the members.
2. What components should be included? A list of potential components was established at the initial meeting through a "brain-storming" session and utilized as an informal survey (Appendix C).
3. Who would be acceptable as the department physician? As a small town fire department with few medical resources, opinions ran very strong on some physicians who **should not** be utilized.
4. How would we be able to track progress, if any, on injuries and levels of fitness to justify continuing or expanding the program? There was much speculation

and anecdotal suppositions but no evidence that would support cost efficiency in Bullhead City.

Action plans were developed for each of the questions cited above with time frames and responsibility attached to each one. It was decided that two weeks was sufficient time to gather enough information to proceed.

FOLLOW UP.....

The answer to the first question was answered with resounding support. Of the 60 department members assigned to suppression duties there were only 3 individuals opposed, and 4 others that had some sort of reservation. When individually questioned at a later date, 6 of those not completely in favor of a program were apprehensive as to the motivation; would their jobs be in jeopardy if not adequately in shape. The final person opposed, stated that his "personal fitness was nobody's business but his own", and would continue to oppose a mandatory physical fitness program. Coincidentally, this individual left the department with a medical retirement prior to the completion of this report.

There was varied support on the components that should be addressed in a complete wellness program. However for the sake of initiating a program in a timely fashion, the components were restricted to those that were more "physical" than "general" overall fitness. The program would include a cardio-respiratory or aerobic component, a musculo-skeletal flexibility component, a body composition component, an overall strength component, and a job related agility component.

After ruling out all of the physician in which members adamantly opposed as being the department physician, the group generally agreed upon a local internist with good reputation as being knowledgeable and thorough.

In order to be able to track individual progress and overall trends of department members, a computer program would either be developed internally by the department resource officer or purchased as a separate program from a software company. In addition, previous workman compensation claims (Appendix D) would be reviewed and categorized for long-term tracking of trends. It is understood that over the short term period covering the time frame of this report, a comparison of injuries would not be valid.

THE NEXT STEP.....

The committee determined that in order to have a successful program, those who were going to be administrators must be knowledgeable and credible. An additional brain storming session and in-depth discussion determined that each of the three shifts should have a representative who would be able to support any other member of the shift in being able to develop a personalized plan of physical fitness. Each shift elected a "fitness" representative.

As the community college was within a week of beginning fall semester, each fitness representative enrolled in a nutrition class as one of the first steps to achieving credibility. In addition, each member enrolled in a correspondence personal trainer course and were successful in receiving their credentials. All costs associated with these courses were borne by the Bullhead City Fire Department.

RESULTS.....

Each of the original research question were answered through the process of research, questionnaires, and new program development.

According to department records, workman's compensation claims history, and shown in appendix D, the injury history is on a gradual climb of more and more duty related injuries. Most of the claims are not attributed to fireground activities, but rather, non emergency duties around the station house. There is much speculation but no firm evidence that a fitness program will help reduce those injuries, lost work time, and costs. To determine whether or not this is the case, continued record keeping and tracking will have to be done.

In the past, physical fitness programs were sporadic and disorganized at best. It was determined that in order to have a successful program, a policy statement from top management in support of a program was required to emphasize management's commitment to physical fitness.

Previous administrations were not overly supportive of utilizing "taxpayer" time to stay in shape. "It was up to each individual to maintain the same fitness level as the day they came to work". Fortunately, a change in attitudes and chief level officers were key in endorsing the policy statement.

The introduction and policy statements, included in the final document (Appendix E), were written by the members of the fitness committee and distributed throughout the membership of the department prior to developing the actual components of the program (Appendix E). The goal of this was prepare the membership that a fitness program was being

developed and to dispel any concerns as to the motivation behind the program. Based upon input from personnel, there were a few minor modifications included in the final statement.

The next step was to develop or adopt medical standards. This meeting not only included the fitness committee members, but also the accepted fire department physician as per NFPA 1500. It was decided that with a few exception, the standards as outlined in *NFPA 1582, Standard on Medical Requirements for Fire Fighters* would be acceptable. A general overview of the medical evaluation is included with the fitness policy manual (Appendix E).

The next hurdle was to determine what components should actually be included in the fitness program. As in the past, a job-related agility test was thought to be an important aspect by most members. All other components of the fitness program should be to develop individuals to assist them in performing these job related tasks. However, it was also the belief of the committee to decrease the frequency of the agility test from semi-annually to annually.

After much discussion, and receiving input from department membership as shown in Appendix C, the other components chosen to be included were cardio-vascular endurance, flexibility, general strength, and body composition. Although body composition is not actually a "physical event", it was decided that determining body composition (more specifically, body fat) would be a good indicator to individual members of the department as to their progress.

It was the general feeling of the committee that aerobic fitness is probably the most critical component in a fitness program. For this reason, a cardio-vascular evaluation mechanism was established as the next priority. As Bullhead City may get extremely hot in the summer and is very windy almost year around, to be accurate and meaningful, the committee

decided that whatever mechanism was chosen, it would have to be done indoors. Much research was completed on different mechanisms for testing aerobic capacity. Some considerations were swimming, bicycling, stair step, and treadmill.

The overwhelming choice of the committee was the treadmill. It was felt that this device would be the most accurate in determining speed and distance traveled. Also, there were ample protocols established that could be utilized for testing. However, the department did not own a treadmill. To overcome this problem, the committee members developed a strong presentation on fire fighter fitness and were successful in petitioning the fire district board members to purchase a moderate quality treadmill with discretionary funds.

Although the fire department has extensive universal weight equipment and ample free weights, the flexibility and general strength components would require no special equipment as the protocols were taken from the book, Comprehensive Wellness for Fire Fighters. These testing mechanisms were extremely easy to understand and administer and were felt to be more than adequate by the committee members. In addition, the individual members of the department could track their own progress over and beyond what would be required.

The body composition analysis would be performed by the shift personal trainers utilizing the skinfolds test as measured by calipers.

There was no question, that the fitness representatives-personal trainers would be the individuals to administer the tests. All that was left to decide was the schedule of testing. It was suggested that all the tests be performed as often as quarterly. Most of the committee felt as

though quarterly would pose a "logistic nightmare" if all the tests were to be administered. As it turned out, this particular issue created the greatest amount of controversy.

Finally, the decision came to a vote. The cardio-vascular test would be administered semi-annually in April and October and the strength test would be administered semi-annually in January and July. Due to the importance placed on flexibility, this test would be administered quarterly in conjunction with the cardio-vascular and strength tests. And, because the committee felt as though it was important for each individual to track their own body composition, this procedure would also take place quarterly. There was universal agreement that the job related agility test should be completed on an annual basis before it became too hot. The month chosen was March.

Although the above schedule looks confusing, their were some compelling reasons to schedule it as such, with the understanding that this testing schedule is subject to change if found to be unacceptable or logistically impractical.

And finally, a dynamic booklet was developed to include all of the information discussed previously; a table of contents, policy statement, medical evaluation, cardio-vascular testing, flexibility, general strength, body composition, and a job-related physical agility. The booklet is considered dynamic in that it readily lends itself to expansion as the program gains support and scope (Appendix E).

DISCUSSION

The literature review establishes that physical fitness has and probably always will be a vital component of fire department operations. The only question that remains is just how involved each individual will become.

Over 80% of the fire department total budget is for personnel. It only makes sense that the Bullhead City Fire Department do everything in its power to maximize the benefits from its investment. A physical fitness program such as the one developed can be implemented with very little monetary investment. And even if there is substantial costs to a more extensive program, that cost may be small compared to lost work time and increased premiums due to a preventable injury.

The key to the success of this program will be on the fact that the program was developed by those who will be administering and participating in it. The membership can boast ownership of the program and therefore much less likely to allow the program to fail.

Due to time constraints and the urgentness of wanting to initiate some type of a fitness program, the document started with the areas perceived to be the most critical at the moment. That being the evaluation of current fitness status. However, it can be easily expandable to include any aspect of personal wellness. Individuals are currently working on a nutritional component, an exercise component, and an employee assistance program. The area of most concern is what should happen to an individual who is unable to pass the job related physical agility test. Should the evaluation process be punitive? The committee was evenly split on this issue. For the time being, it is hoped that the complete evaluation process of aerobic

endurance, flexibility, muscular strength, and body composition will encourage unfit members to become more fit by identifying areas of weakness. The only action requested by the department is that the unfit member show significant improvement within a six month time frame. After all, the original goal was to have a healthier workforce.

RECOMMENDATIONS

It must be realized by department members that the welfare of the citizens in the community must be a high priority. Unfit fire fighters are less able to fulfill their commitment if they cannot perform the basic functions of the job. It is recommended that this fire fighter duty be emphasized and continually evaluated. It is much easier to remain in shape that try to get back into shape.

Each community and each fire department have unique cultures, needs, and desires. There is not one comprehensive program that will meet all the needs of all agencies and fire fighters. Therefore, it is recommended that each fire department create a program that will be most beneficial to those who will be participating.

Elicit the knowledge, skill, and expertise of department members. Each agency undoubtedly has members that would interested in organizing and establishing a fitness program for their department. Even if individuals do not want to be part of the organization team, it would be a wise practice to ask for their input. It is hard to complain at a later date it you didn't give input when you had the opportunity.

The project of developing a comprehensive document to include all aspects of wellness is a huge endeavor. Had this committee set out to produce a document that was all inclusive, it would have taken a much longer time. There is a good possibility the committee members would have become bored or discouraged if they could not witness progress being made. Therefore, it is recommended that if a document is to be produced, it should be done in logical stages. The Bullhead City Fire Department document has started with a few chapters and is already expanding to include nutrition advisement, employee assistance, and weight training.

And finally, it is recommended that administration take a back seat and facilitate rather than force a particular fitness program on the membership. As was the case in Bullhead City, the membership is usually harder on itself than the administration would have been.

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